

**U. S. DEPARTMENT OF ENERGY
WORK BREAKDOWN STRUCTURE DICTIONARY
PART II - ELEMENT DEFINITION**

1. PROJECT TITLE/PARTICIPANT Environmental Management/Paducah Remediation Services, LLC (PRS)		2. DATE 06/29/07	3. IDENTIFICATION SITE Paducah Project DOE Portsmouth/Paducah Project Office (PPPO)
4. WBS ELEMENT CODE 04.13.03.01		5. WBS ELEMENT TITLE Outyear PCB Activities	
6. INDEX LINE NO. N/A	7. REVISION NO. AND AUTHORIZATION Rev. 0		8. DATE 06/29/07
9. APPROVED CHANGES N/A			
10. SYSTEM DESIGN DESCRIPTION N/A		11. BUDGET AND REPORTING NUMBER N/A	
12. ELEMENT TASK DESCRIPTION This is a planning level WBS Dictionary. <u>WBS STRUCTURE</u> The scope of this element includes the following subelements. <ul style="list-style-type: none"> • WBS 04.13.03.01.01 Outyear PCB Activities Subproject Management • WBS 04.13.03.01.02 Outyear PCB Activities Operations <u>INTRODUCTION</u> The SOW of this subproject is to perform activities at the Paducah Gaseous Diffusion (PGDP) to maintain compliance with Toxic Substances Control Act (TSCA) and Uranium Enrichment TSCA Federal Facilities Compliance Agreement (UE-TSCA-FFCA), as well as applicable Department of Energy (DOE) Orders. This includes maintaining polychlorinated biphenyls (PCB) collection and trough system in the cascade buildings, cleaning up spills, and collecting quarterly air quality data.			
<u>LOGIC RELATIONSHIPS</u> Interfaces: <u>Internal</u> <ul style="list-style-type: none"> • All contractor project managers and staff • All subcontractors <u>External</u> <ul style="list-style-type: none"> • U.S. Department of Energy (DOE) PPPO and support contractors • DOE Headquarters or other DOE sites (if applicable) • U.S. Environmental Protection Agency (EPA) • Commonwealth of Kentucky (KY) • Site tenants including United States Enrichment Corporation (USEC); Uranium Disposition Services, LLC; and Swift and Staley Team (SST) • USEC services in the area of property, information technology, radios, etc. • SST, particularly in the areas of property management, information technology, and security. • Nevada Test Site (NTS): Profiling and disposition of newly generated and classified and fissile low-level waste (LLW), if required or applicable. • EnergySolutions: Profiling, treatment, and disposition of mixed and LLW, if required or applicable. • TSCA Incinerator, if required or applicable. • Commercial treatment, storage, and disposal facility: For treatment and disposal of nonradioactive hazardous waste, if required or applicable. 			

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- Stakeholders
- Citizens Advisory Board and supporting contractor EHI.
- DOE Integrated Safety Management System (ISMS) Verification Team
- Other nonregulatory key interfaces

Time Sequencing with Other Work:

- This is an ongoing activity to end of 09/30/19.
- Task duration 10 years (10/01/09 – 09/30/19).
- No predecessor/successor relationships within the scope of the existing contract except those identified as conditions at time of contractor assumption of responsibility.

SCOPE DESCRIPTION

WBS 04.13.03.01.01 Outyear PCB Activities Subproject Management

Provide overall management activities associated with this subproject. Activities performed under this subelement include the following:

- Perform technical, contractual, and project functions necessary to effectively manage and report scope, schedule, and budget.
- Maintain all activities within the defined safety, environmental, and quality requirements.
- Perform technical and personnel management functions.
- Maintain technically qualified and properly trained personnel.
- Develop, evaluate, and report project performance metrics.
- Interface with DOE, KY, EPA, other prime contractors, and stakeholders, as needed.

The method(s) used for determining earned value for this WBS element is Level of Effort.

WBS 04.13.03.01.02 Outyear PCB Activities Operations

- Maintain PCB Collection and Trough System - Provide overall field activities associated with the maintenance of the PCB collection and containment trough system in the cascade buildings (C-331, C-333, C-335, and C-337). These buildings cover approximately 6,400,000 ft³ and contain approximately 16,000 collection troughs. Operations personnel will conduct facility walkdowns for monitoring of potential spills and accumulating drips into collection containers for disposition.
- Spill Cleanup - Provide overall field activities associated with the cleanup, sampling, and decontamination of PCB spills and leaks (estimated to be 40 small spills per year).
- Air Quality Data - Collect quarterly air quality data throughout the cascade buildings.
- PCB liquids for the TSCA Incinerator from other projects (legacy waste, newly generated waste, and DMSAs) will be combined with the PCB activity liquids in the same batches. The sample and analysis costs (using the USEC lab) and transportation costs of these liquids will be covered in this WBS.

The method(s) used for determining earned value for this WBS element is Percent Complete.

Before beginning fieldwork, the project team must have an internal field review (IFR). For this IFR, the project team will put together a work package. This work package includes the following:

- Work instructions – includes hold points
- Training matrix and evidence of training
- UCD/USQD
- Lessons Learned
- Work authorization and work release from facility managers

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<ul style="list-style-type: none">• Procedures• AHA• Excavation/Penetration Permits• RWP• Team Meeting documentation• Project Organizational Chart <p>In addition to the above, a Sampling Analysis Plan (SAP), Quality Assurance Plan (QAP), Waste Management Plan (WMP), and Health and Safety Plan (H&S) may be needed for any non-CERCLA actions.</p> <p>For CERCLA actions, the appropriate FFA/CERCLA documentation will be required which will include SAP, QAP, WMP, H&S Plan, and other documents, as applicable to the action. These documents may require regulatory approval.</p> <p>The work package and other documentation are developed by personnel that charge to this project and also by personnel that charge to project support service center (i.e., QAP and RWP).</p>		
<u>DELIVERABLES</u>		
WBS 04.13.03.01.01 Outyear PCB Activities Subproject Management		
<u>Element Milestones</u>		
<ul style="list-style-type: none">• None		
<u>Element Deliverables</u>		
<ul style="list-style-type: none">• Paducah Contractor Quality Assurance (QA) Project Plan• Paducah Contractor Environmental, Safety, and Health (ES&H) Plan• Provide input to the following reports and submittals (if applicable):<ul style="list-style-type: none">○ Monthly Project Performance Report○ Risk Management Plan updates○ Site Management Plan (SMP)○ SWMU Assessment Report○ Semiannual Critical Analysis Report○ Presentations○ Federal Facility Agreement (FFA) briefings○ Labor determinations○ Gold Chart Performance Metrics○ Annual updates to Site Treatment Plan○ Annual Compliance Agreement Report○ Annual ISMS Update○ Annual Smart Work Standards Update○ Financial Reporting, Management Analysis Reporting System○ Annual Statement of Costs Incurred and Claimed○ Monthly Commitment Reports○ FFA Semiannual Progress Report○ Remedial Action/Regulatory Commitment Tracking Report○ Other reports/documents, as necessary		

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WBS 04.13.03.01.02 Outyear PCB Activities Operations		
<u>Element Milestones</u> <ul style="list-style-type: none">• None		
<u>Element Deliverables</u> <ul style="list-style-type: none">• Submit performance metrics as required.• Collect quarterly air quality data and submit quarterly and annual reports.		
<u>REQUIREMENTS</u>		
<ul style="list-style-type: none">• CERCLA/National Contingency Plan• KY Hazardous Waste Permit (KY8-890-008-982)• FFA for PGDP• SMP for PGDP (annual revisions)• Applicable state and federal laws and regulations (applicable or relevant and appropriate requirements)• PRS ISMS• UEO-1066, as updated - Lease Agreement between DOE and USEC, Revision 4, dated October 30, 2001• Enclosure to GDP 95-0018, as updated - USEC and DOE Resolution of Shared Site Issues, Revision 1, dated March 30, 1998• Applicable contractor plans, policies and procedures.• Waste acceptance criteria for all applicable treatment and disposal facilities that were in effect on April 24, 2006.• Applicable DOE Orders• Applicable Federal Acquisitions Regulations		
<p>It is the core value of the contractor that the safety and health of every worker, the public at large, and our environment are the most important assets that we are entrusted to protect. To accomplish this, an ISMS, based on DOE's ISMS, has been implemented that incorporates the five core functions and is based on the seven guiding principles. The objective of ISMS is to systematically integrate safety and environmental protection into the planning and execution of all work activities. The term safety encompasses Nuclear Safety, Industrial Safety, Industrial Hygiene, Occupational Health, Health Physics, and environmental issues. ISMS requirements flow-down to Contractor's subcontractors. The five core functions are (1) define the scope of work, (2) analyze hazards, (3) develop and implement hazard controls, (4) perform work within controls, and (5) provide feedback and continuous improvement. The seven guiding principles are (1) line management responsibility for safety, (2) clear roles and responsibilities, (3) competence commensurate with responsibility, (4) balanced priorities, (5) identification of safety standards and requirements, (6) hazard control tailored to work being performed, and (7) operations authorization.</p>		
<p>Before a subproject begins, several activities must be completed that demonstrate that all involved in the project have completed rigorous health and safety reviews and that all potential hazards of doing the work have been identified. The routine activities in remedial actions are conducted in accordance with standard operating procedures, activity hazard analyses, and Integrated Safety Management plans. Nonroutine work will require a readiness assessment, as necessary, to ensure complete health, safety, and environmental reviews prior to work start. This assessment is conducted by people experienced in similar kinds of work with the right to examine all aspects of a project about to commence and requires that the project team provide documented evidence that any applicable requirements of the job have been met.</p>		

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SCOPE ASSUMPTIONS

WBS 04.13.03.01.01 Outyear PCB Activities Subproject Management

- Field labor costs include an expected productivity rate of 70%.
- PCB spills will not generate more than 340 ft³ annually, on average, through the end of the project.
- Regulations governing the management of PCB wastes will not change.

WBS 04.13.03.01.02 Outyear PCB Activities Operations

- The Safety Authorization Basis for this work is approved.
- The incidence of spills and leaks has been increasing an average of 68% per year over the past four years. Based on this trend, it is assumed that the number of spills will level off and average approximately 70 spills per year.
- This estimate is based on the information provided in the SOW and interviews conducted with individuals familiar with the condition and current regulatory status of the PCB activities.
- Field labor costs include an expected productivity of 70%.
- Preventive maintenance systems are in place, and all data collection and reporting activities are current.
- Regulatory requirements for packaging, transport, treatment, and/or disposal will not change during the duration of the project.
- Costs for thermal treatment of PCBs at the TSCA Incinerator will not be borne by contractor as long as the waste stream has been included on the DOE-approved TSCA Incinerator annual burn plan.

COMPLETION CRITERIA

WBS 04.13.03.01.01 Outyear PCB Activities Subproject Management

- The cleanup and disposal of PCB spills/leaks and maintenance of PCB collection trough systems is an ongoing activity through the end of this contract.
- Transmittal of final quarterly air quality data reports.

WBS 04.13.03.01.02 Outyear PCB Activities Operations

- The cleanup and disposal of PCB spills and leaks and maintenance of PCB collection trough systems is an ongoing activity through the end of this contract.

RISK MANAGEMENT

See Risk Management Plan for analysis.

CERCLA AREAS AND SWMU

None

BASIS OF ESTIMATE

The outyear costs are based on the PRS 2009 fiscal year baseline estimate.

1. Summary of Site Conditions

- PCB waste management activities result from the leaks of PCB liquids and generation of PCB solids from equipment and ventilation ducts in the cascade process. These buildings cover approximately 6,400,000 ft² and contain approximately 16,000 collection troughs. These areas require compliance with Radiological Work Permits and security requirements for access and

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<p>operations. Wastes generated are TSCA-regulated mixed wastes.</p> <p>2. Estimating Methods <input type="checkbox"/> Parametric <input type="checkbox"/> Bottom-Up <input checked="" type="checkbox"/> Other: Parametric and Bottom-Up </p> <p>3. Sources of Estimating Resources and quantities of materials were developed based on knowledge of the scope derived from review of the Request for Proposal and supporting technical documents, on review of historical spill data, review of current operations, and on the experience and professional judgment of the assigned estimator. Labor – Estimated level of effort for skilled labor, professional, and management resource staffing is based on the contractor and EnergySolutions (major subcontractor) experience on projects similar to the PCB Activities project, including Fluor Fernald Waste Management, Idaho Falls Waste Management, and Hanford Waste Management. Equipment – Vendor quotes, National Alliance Contracts, and Construction Industry Blue Book (fuel, oil, gas and materials). Materials – Vendor quotes or National Alliance contracts Other Direct Cost – Vendor quotes or National Alliance contracts Transportation – Direct vendor quotes Subcontracts – Subcontractor cost proposal or existing DOE contract pricing </p> <p>4. Basis of Estimate (Unescalated values) See Detail Estimate. </p> <p><u>WASTE VOLUMES</u> See attached waste performance metrics, as applicable. </p> <p><u>PROJECT SCHEDULE</u> See attached schedule. </p> <p><u>BASELINE BY YEAR</u> See attached Baseline by Year Report. </p>		